WEATHER AND CROP CONDITIONS

A radio talk by J. B. Kincer, Weather Bureau, broadcast in the Department of Agriculture period, National Farm and Home Hour, Wednesday, August 8, 1934.

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How do you do Folks:

There is so much to say about the weather we have been having this year that I hardly know where to begin. It is said that the weather does more unusual things than anything you can think of, but this year it has done one better; that is, instead of stopping at the unusual it has been behaving in a manner never before witnessed since extensive weather records have been kept. Unprecedented severe drought and heat have prevailed since early spring, especially in the mid-West and Southwest, and over large and important agricultural areas conditions in July became worse, instead of better.

The extremely high temperatures and scanty rainfall greatly intensified unfavorable conditions in all sections between the Mississippi River and Rocky Mountains, except in some upper Mississippi Valley localities, principally parts of northern Iowa and the southern portion of Minnesota.

In the Ohio Valley and Lake region July rains were decidedly spotted, with good falls in some sections and very scanty in others. In this area the month was also extremely warm, the heat equaling the previous high record of temperature at many places. In the Atlantic and central and east Gulf States conditions were decidedly more favorable. In these a few limited areas became droughty during the month, but the latter part brought general, in most places generous, showers, which have greatly improved the situation from Tennessee and North Carolina southward, and from Ohio, eastern Kentucky, and the Virginias northeastward.

The west Gulf area continues extremely warm and dry, except in coast districts where heavy to excessive rains occurred. Parts of Arizona, New Mexico, and Utah have had substantial showers during the last few days, which materially relieved conditions; also July brought more than normal rainfall to a good many localities in Wyoming, and parts of Idaho.

The most remarkable feature of July weather was the intensive heat. The month was outstandingly hot over the greater part of the country. When the entire United States is considered it was the hottest month ever known, with the all-time maximum temperature records exceeded in many places, especially in the mid-Western States. The extent of the abnormal heat is indicated by the fact that some Weather Bureau stations reported the highest temperatures ever known from such widely distant places as Kalispell, Mont., to Chattanooga, Tenn., and from Flagstaff, Ariz., and Corpus Christi, Tex., to Columbus, Ohio, while many stations in the Rocky Mountain States, the Great Plains, the lower Missouri Valley and the Southwest, report the warmest month of record and a number east of the Mississippi River equaled the previous warmest.

Suppose we give you a few samples of conditions in the heated area.

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At Des Moines, Iowa, July had 11 days with temperatures 100° or higher, and the average maximum for the entire month was 95°; St. Louis had an average maximum of 98°, with 13 days of 100° or higher; Columbia, Mo., scored still higher, with the temperature soaring to the century mark and above on 19 days, while Kansas City, Mo., had 21 and Topeka, Kans., 22 days with similar heat. Oklahoma City had 21 days and Fort Smith, Arkansas 25 days with the mercury topping the 100° mark and most days went well above that figure. In many places the average maximum temperature for the 31 days of the month was considerably above 100°. In fact, at Fort Smith, Ark., for the 49 days up to yesterday, the average maximum exceeded 102° and on 41 of the 49 days the mercury reached or exceeded the 100° mark.

There is a marked coincidence in the July temperatures this year in that they were quite similar to those for July 1901, which was the previous hottest month of record, though the departures from normal were somewhat larger in most places in 1934 than in 1901. This made July, just passed, the hottest month ever known in the United States. In a large area between the Mississippi River and the Rocky Mountains, extending from South Dakota to northern Texas, the month was from 6° to 10° warmer than normal, and in about half the country it was 4° or more warmer than normal. The upper Lake region, the extreme West, extreme South, and extreme East had about normal warmth, though mostly somewhat above normal.

July made the third month in succession with abnormally high temperatures, and the three together establish, by far, an alltime record for abnormal heat for these months in the central valleys and mid-West. The three months, May to July, combined, were not only the warmest of record in Kentucky, Ohio, Indiana, Illinois, Minnesota, Iowa, Missouri, Arkansas, Oklahoma, Kansas, Nebraska, and the Dakotas, but the excess heat above normal in some States was more than twice as great as heretofore experienced for any year.

So much for July heat, but this is only half the story, for another just as unfavorable feature of July weather was the lack of rainfall. Much of the Great Plains, the lower Missouri Valley, and the Southwest had less than one-fourth of normal, and a considerable southwestern area had less than 10 percent of normal. Oklahoma City, had only 5 percent of normal; Fort Smith, Ark., 4 percent; Amarillo, Tex., 7 percent; Fort Worth, Tex., 3 percent; and Roswell, N. Mex., 6 percent; while Dallas, Tex., had only 0.01 inch of rain during the entire month. However, rainfall was above normal in parts of the upper Mississippi Valley, in local areas east of the Mississippi River, along the west Gulf coast, in the extreme Northwest, and at a good many places in central Rocky Mountain Sections.

When we consider the month's rainfall on the basis of State averages, it was below normal in all except some half dozen States. Nearly complete records show that Florida, Alabama, North Carolina, Virginia, Kentucky, and Iowa, had slightly above normal, but all others were deficient. The Iowa average for the State as a whole was 3 percent above normal, but this relatively large showing was due to extremely heavy rains in limited areas, the records for different stations varying from 9.88 inches to 0.06 inch. Illinois, also, had widely varying amounts, ranging from more than 7 inches in some localities to less than one-tenth of an inch in others.

Oklahoma had only 19 percent of normal; Missouri 29 percent; Kansas and Nebraska 34; Idaho 36; Arkansas 42; New Mexico 48; and Montana, North Dakota, and Michigan each only 50 percent of normal, I believe we can understand a little better just what these shortages in rainfall mean to crops by putting the matter in another way. As you know rainfall in the West and Northwest has been deficient for many months. Now if you happen to live on a farm in North Dakota and we consider the records for the last 4 months, April to July, assuming that your farm had as much rain as the average for the whole State for these four months, you have had a shortage of 520 tons of water for each acre of land on your farm. In Ohio on the average the shortage for these four months is 590 tons for each acre; in Oklahoma, 760 tons; in Nebraska, 825 tons; and in Missouri more than 1000 tons. Mind you, a shortage of more than 1000 tons of water for each acre of land so far during this year's growing season.

From this weather story I do not believe you will have to draw very heavily on your imagination to get a pretty good mental picture of just what has happened to crops, and grazing lands in the drought areas.

The persistence of abnormally high temperatures and continued absence of rainfall from the Mississippi Valley westward to the Rocky Mountains have made extremely unfavorable conditions in practically all sections. In many places not a green thing remains in sight. Except in parts of Iowa, southeastern Minnesota, some southern localities, and a few favored spots elsewhere, all growing crops have been severely damaged and most of them entirely destroyed. Most of Michigan and parts of Wisconsin recently had helpful showers, but rains in the Ohio Valley have been spotted. A good many sections, principally in Kentucky, Illinois, southern Indiana, and parts of Ohio, had fairly good rains, but in others it was entirely inadequate.

In the Atlantic area conditions are mostly favorable, but there are a good many places where rain is rather badly needed at this time especially in northern and southwestern New York, and some Piedmont sections of the South. In east Gulf States good growing weather has continued in most places and recent rains in southern Texas have improved the situation there. In the Rocky Mountain area a good many localities received helpful showers, expecially northern Arizona, northwestern Colorado, and portions of Wyoming and Utah, but most places are still unfavorably dry in these States.

Late small grain crops suffered considerably in the Northwest and there is very little available pasture lands west of the Mississippi River.

Corn, especially was seriously damaged by the July weather, notably in southern Iowa, western Illinois, Missouri, northern Texas, Oklahoma and from Kansas northward to the Canadian border. In the more eastern States the crop is making satisfactory progress, as a rule. In general, the weather was favorable for cotton in the eastern half of the belt and very unfavorable in the western half. We frequently hear the question, when will it ever rain? Which brings to mind that our reports this morning show some fine rains in eastern North Dakota and Minnesota, where our President is now. I wonder if we could induce him to swing down through the Plains States to Northern Texas and eastern through Missouri on his way back to the Capitol?